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ABSTRACT

The U.S. Census Bureau conducts the Schools and Staffing Survey (SASS) for the National Center for Education Statistics (NCES). The SASS is a set of integrated self-administered surveys designed to obtain national information on all aspects of the school system. The Teacher Listing Form (TLF) is the first in the SASS series. It is sent to the principal early in the school year to list all teachers at the school. These results are used to select teachers from the school to participate in the SASS. In 1994, the Teacher List Validity Study uncovered some problems with the TLF. This document reports on cognitive research conducted to find out why respondents made the mistakes they did so that the TLF could be improved. A cognitive interview was held with one person from each of 19 sampled schools in Pennsylvania, Maryland, and Virginia (usually the principal). A combination of cognitive techniques, including think-aloud protocols, provided data. The interviews revealed that the TLF needed to be reorganized so that important conceptual information was not interrupted by unrelated information. Some instructions needed to be rearranged for clarity. Better definitions of what to include or exclude were required. Respondents had difficulty in reporting the subjects teachers were qualified to teach, so a decision rule was designed to help them choose a subject. Breaking the data into sections that correspond more closely to the real-world organization of schools is also recommended. An appendix contains the TLF. (Contains two tables.) (SLD)

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for the
Schools and Staffing Survey

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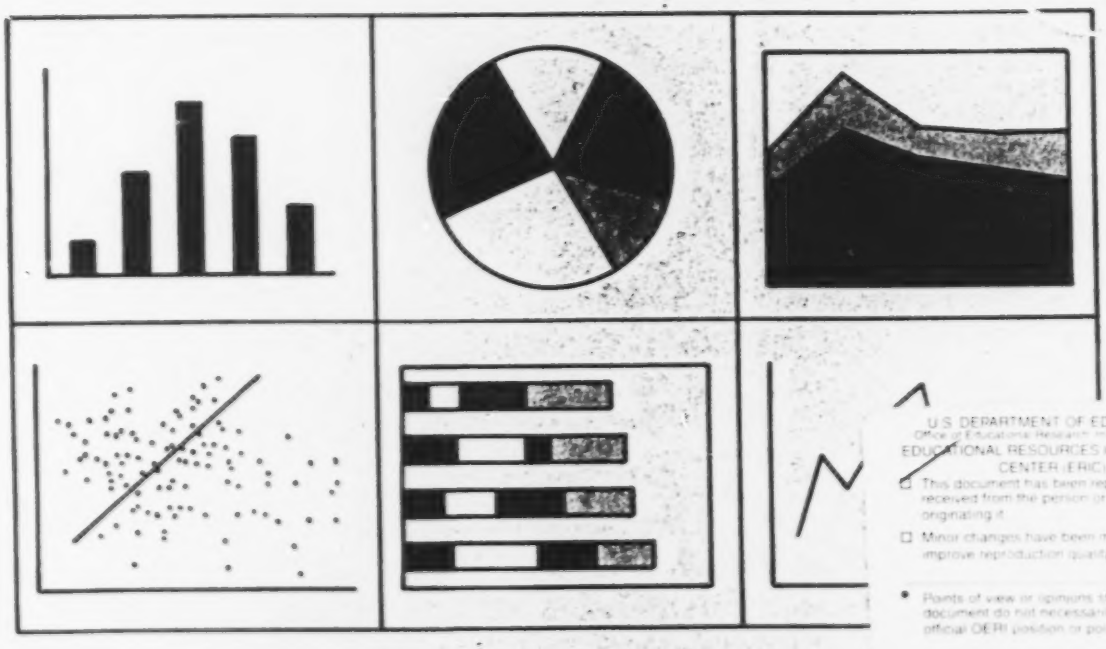

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Cognitive Research on the Teacher Listing Form for the Schools and Staffing Survey

Working Paper No. 96-05 February 1996

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February 1996

Foreword

Each year a large number of written documents are generated by NCES staff and individuals commissioned by NCES which provide preliminary analyses of survey results and address technical, methodological, and evaluation issues. Even though they are not formally published, these documents reflect a tremendous amount of unique expertise, knowledge, and experience.

The ***Working Paper Series*** was created in order to preserve the information contained in these documents and to promote the sharing of valuable work experience and knowledge. However, these documents were prepared under different formats and did not undergo vigorous NCES publication review and editing prior to their inclusion in the series. Consequently, we encourage users of the series to consult the individual authors for citations.

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Cognitive Research on the Teacher Listing Form for the Schools and Staffing Survey

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February 1996

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Cognitive Research on the Teacher Listing Form

for the

Schools and Staffing Survey

by

Cleo R. Jenkins and Dawn Von Thurn

Center for Survey Methods Research

I. Executive Summary

The cognitive interviews revealed that the Teacher Listing Form needs to be reorganized so that important conceptual information is NOT interrupted by unrelated information, which is both distracting and potentially harmful, and so that it makes more sense, both verbally and non-verbally.

The very important note from the cover page about what to do if the school's grade range differs from the one printed on the cover needs to be made more prominent. Also, the screener questions (items 1, 2, and 3) need to be reworded.

What is now Instruction 1 (column reporting) and Instruction 2 (the list) should be reversed. This is because, operationally, respondents need to carry out Instruction 2 first: they need to determine who to list. After they have determined who to list, then they need to determine how they should be reported in columns (f) General Elementary through (o) Other.

We re-designed the include/exclude list so that it mentions all of the categories in the table, plus it better defines the more troublesome areas: the "special education," "general elementary," and the "other" category. Also, we tried a different approach to listing the "other" teaching staff. In the first part of the list (Include on the List), we try to get respondents to think about and categorize what even they have little difficulty recognizing as their teachers. (For the most part, their difficulties with these teachers were with how to categorize them according to our definitions, which is why we tried to provide more comprehensive definitions.) After this, we come along and remind respondents to include other teaching staff they may not have originally thought about, the teaching principals, etc. Finally, since many respondents had difficulty determining whether or not to report librarians and speech therapists, we included specific examples regarding them.

The cognitive interviews revealed that respondents either reported all of the subjects teachers were equally qualified to teach, or they agonized over making this decision. As it is now, we tell respondents to choose the subject the teacher is most qualified to teach. One would not expect this to be difficult, but it is. One option, and the one we are recommending at this point, is to give respondents a decision rule they may be able to abide by:

arbitrarily choose one of the subjects over the other(s).

Last but not least, we **strongly recommend** that the questionnaire be redesigned to ask for information in a way that more closely resembles reality for respondents. As it is now, middle or combination schools have a lot of difficulty providing information in the format requested. It would be much better for them if we could break the data into three sections--Elementary School (K-5), Middle School (6-8), and Secondary School (9-12)--and collapse the data later to fit our needs.

II. Introduction

The Census Bureau conducts the Schools and Staffing Survey (SASS) for the National Center for Education Statistics (NCES). SASS is composed of a set of integrated self-administered surveys designed to obtain national information on all aspects of the school system. The survey was most recently conducted in 1993-94, and is currently scheduled to be conducted every five years.

The Teacher Listing Form (TLF) is the first in the SASS series. It is sent to the principal early in the school year asking for a listing of all the teachers at the school. It is used to select teachers from the school to participate in the SASS. In 1994, a study, known as the Teacher List Validity Study (TLVS), was undertaken by the Demographic Statistical Methods Division to evaluate the quality of the data reported on the TLF. This study exposed problems with the TLF (Waite, 1994). For instance, it showed that public schools most often erroneously listed librarians and speech therapists as teachers.

Although the TLVS attempted to find out why the schools excluded certain teachers and included persons that should not have been included, unfortunately the study did not obtain very insightful reasons. Most of the respondents simply said that they "forgot about that person" or "I thought this person should/shouldn't be included."

The cognitive research we undertook attempted to uncover with greater understanding why respondents made the kinds of errors that they did so that we could make informed recommendations for correcting these errors in future TLFs.

III. Methodology: Cognitive Interviews

We conducted cognitive interviews with one person from the school. Most of the respondents were principals. The remainder were those who would ordinarily be responsible for filling out the form: either the administrator, superintendent, business manager, or administrative assistants. We used a combination of cognitive techniques--including the concurrent think-aloud technique, the use of paraphrasing, and retrospective interviewing. Respondents were given the Teacher Listing Form to complete. We asked them to read aloud as they read through the form and to think aloud as they answered

the questions.

We traveled to schools in four counties: York County, Pennsylvania; Frederick County, Maryland; and Spotsylvania and Richmond Counties, Virginia. We conducted nineteen interviews, distributed by school type and size (see Tables 1 and 2). The interviews took from 1/2 hour to 1-1/2 hours, depending on the size of the school. With the respondent's permission, the interviews were tape-recorded and a summary of each was written.

IV. Summary and Analysis

Cover Page and Instruction 2 at the Top of Page 4

A number of respondents either skimmed the cover page briefly or overlooked it all together. In addition, the grade range printed on the cover was incorrect a number of times. Although an instruction at the bottom of the page directed respondents to call the Census Bureau if their grade range differed, none of them did. Of course, an interviewer from the Census Bureau was present. However, at least one respondent said that he was certain he would not bother to call the Census Bureau under actual conditions.

When we reached instruction 2 on page 4, it was evident that ignoring the grade range differences could lead to misreporting problems. Unless directed to specifically omit someone in the list on page 4 that follows instruction 2, the vast majority of respondents simply took instruction 2 to be asking them to list the teachers who taught at their school. The good news is that this was the correct interpretation when our definition of the school was actually incorrect. This occurred, for instance, when we defined the school as K-6, but the school had just recently expanded to include 7 and 8. The bad news is that the same situation will invite problems when we define the school differently than the respondent, and we really want information according to our definition, not theirs. This may happen in the mid-West, for instance, when we define a small school as two schools--an elementary school (grades K-6) and a secondary school (grades 7-12)--but the school defines itself as one school (grades K-12).

There are two problems with the instruction to call the Census Bureau if the grade range differs:

1. The first problem is that respondents who skim or overlook the cover page never see this instruction. Furthermore, although the instruction at the top of page 4 directs respondents to the grade range listed on the cover page, it never directs respondents to read the accompanying instruction at the bottom of the page.

2. The other problem is that even when respondents do perceive the instruction, they do not understand its importance (i.e., the implications of what it means if their grade range differs), so they tend to ignore it.

There was, however, one respondent who actually read and was confused by instruction 2. This respondent acknowledged that the teacher listing should be of teachers within the grade range shown on the front cover, which amounted to sixth through eighth grade in her case. She recognized this as important because she had one disabled class that was ungraded in which the kids aged upwards to 19 years old. She was not certain if she should report this teacher or not. On the one hand, she decided that she should report the teacher because the teacher was at her school. On the other hand, she pointed out that some of the students were 19 years old and it was not considered a grade, but a program. She decided to postpone making the decision until she needed to, but as she became engrossed in filling out the form, she forgot about this situation. After being probed about this class at the end of the interview, she included the teacher. It is unclear if this "teacher" should be reported or not.

Question 1--Only PK, K, and PS?

This was the most misunderstood question on the form. In many cases, respondents answered the question incorrectly. In some cases, they answered the question correctly, but it was highly evident that they had difficulty processing it. Their reading slowed down substantially and they re-read the question, at least once and sometimes several times, before finally being able to understand it. In a number of cases, respondents answered the question correctly, although they gave every indication of misunderstanding it.

One very serious problem with this question is that it asks for the opposite of what respondents expect. Rather than asking if the school teaches elementary or secondary students, which is the most common situation for a school, the question asks if the school teaches only prekindergarten, kindergarten or postsecondary students, which is a much more rare event in comparison. One respondent astutely pointed out our mistake when he said that people expect to answer "yes" to questions, and this question and the ones that follow are framed such that the researchers expect a "no" response. Confounding this situation is the fact that much of this question is dependent on the word "only." If respondents accidently overlooked this word and keyed in on the words "prekindergarten" or "kindergarten," they were likely to interpret this question as asking if they had prekindergarten or kindergarten. Of course, the answer was often "yes."

A number of respondents had real difficulties understanding what we meant by "postsecondary" students. Surprisingly, respondents sometimes thought "post" meant "pre," as in prior to elementary school. One respondent correctly understood that it meant "beyond," but at first she mistakenly thought it meant "beyond" pre-kindergarten or kindergarten. (Eventually, she realized it meant beyond high school.)

One explanation for this, which is similar to the explanation given above for the question itself, is that in keeping with the norms of conversation, respondents expect us to be asking them questions about their situations. If, for example, they are an elementary school, it may not easily or quickly occur to them that we might be asking for information outside of their realm--that is, for information about students beyond high school. Instead, they see the

question in light of their situation. In this case, "postsecondary" might reasonably be interpreted as "beyond kindergarten."

Question 2--School District?

This question did not suffer from as many problems as the last one, but still respondents had difficulty with it. For instance, a public elementary respondent said that she had trouble understanding the article "a." She said that if it had said "IN a school district," she could have answered this question easily. The respondent was equipped with the proper knowledge to answer this question correctly, but she seemed to be having trouble understanding its intention. Why, she wondered, would we be asking her if the institution named on the cover page was a school district rather than IN a school district? Other respondents wondered this as well. One reason respondents were confused by this question is because we have printed the school's name and grade range on the cover page, giving them the impression that we already know it is a school. Why then, they think, are we asking this question.

In addition, a couple of private school respondents demonstrated some difficulties with this question, although this did not impede them from answering the question correctly. For instance, one respondent did not know what a school district was. However, he assumed that since he did not know what it was, he must not be one, which resulted in his correctly answering "no" to this question. He also said that the question bothered him because it assumed that the school was within a school district, which was a faulty assumption in his case. Another private school respondent pointed out that private schools do not have school districts, suggesting that this question did not apply to him. Still he went ahead and correctly marked "no."

Question 3--Administrative Unit?

Quite a few respondents had difficulty with this question. these respondents often overlooked the parenthetical phrase (and not a school unit), and this seemed to affect their interpretation. For instance, one respondent who overlooked this phrase responded that yes, they were part of the County Public School System.

If "Yes" Instruction

A number of respondents overlooked this instruction, which in this case was advantageous, because they had incorrectly answered "yes" to one or more of the previous questions, but under other circumstances might be disadvantageous in that respondents are likely to miss this instruction when it truly does apply. One respondent, however, used this instruction as a clue that he had mistakenly answered "yes" to item 1. After learning that he should call the Census Bureau if he answered "yes" to any of the previous questions, he went back to item 1 and re-read it. He finally understood it to be asking if he ONLY had prekindergarten rather than if he had prekindergarten, and correctly changed his answer to "no."

Question 4--Name?

Quite a few respondents had difficulty with the layout of this question. They had difficulty determining if the first line was supposed to be used for their "name" or "title." Also, one respondent wondered why we were asking for this information, another wondered if he should print, and a couple wondered if we were asking for the school's phone numbers.

Instruction 1-- School Level and Subject Taught Instructions at the Bottom of Page 3

Most respondents read through, or at least skimmed the instructions before completing the form, and referred back to them when completing the form, indicating that the instructions were necessary for completing the table later on. However, there were two major problems with the instructions.

One, respondents perceived the instructions as burdensome, which in turn meant that they perceived the task of filling out the questionnaire as more difficult than it really was. One respondent, who presided over an elementary school, was clearly frustrated that he needed to wade through seven instructions when only two of them applied to his school. The other five pertained to secondary schools. He could not understand why this was necessary. After all, we had clearly demonstrated that we knew his was an elementary school by labeling the front of the questionnaire with K-5.

Two, respondents often had difficulty perceiving, understanding, or agreeing to carry out the instructions, as noted in the remainder of this section. In response to the first instruction **"If you need assistance, please call the Census Bureau..."** a few respondents said that they would not bother, even if they needed help with the form, while a couple of respondents skipped over this instruction entirely. Even more respondents overlooked the **"Please return the form within 2 weeks"** instruction. These respondents were drawn to the bolder question **"How are columns (f)-(o) completed?"** just below the instructions. Not only is the question made more prominent than either instruction because it is bolder and bigger, but it is numbered "1," all of which are non-verbal cues attracting the respondent's attention. It is worth noting that the part of the instruction telling respondents to return the form in the enclosed envelope really is useless at the beginning of the survey. It may be important to tell respondents to complete the form in two weeks up front, but they should be told how to return the form at the end of the survey when they actually need to act on this information. Otherwise we are needlessly asking them to store the instruction in memory, or we are asking them to hunt for this instruction later on, and from the respondent's perspective, this instruction is then buried among many instructions. One of the respondents who overlooked this instruction at the beginning of the survey did spend time at the end hunting for something to tell her what to do next.

Many respondents wondered what the question **"How are columns (f)-(o) completed?"** meant, since nothing on this page indicated to what "columns (f) - (o)" referred. One respondent seemed to sum up most respondents' reactions to this question when he said, "...where in the hell are columns (f) through (o)?". After wondering about this, most of the respondents generally turned the page and found the columns. However, some never did turn the page. Although confused, they decided to continue reading through the instructions.

They probably figured that the instructions would eventually settle this issue, although they never do.

One respondent misunderstood the instruction in paragraph 4:

> **If a teacher teaches both elementary and secondary students at this school, mark (X) in the appropriate column under the level (Elementary or Secondary) at which the teacher teaches the greater number of classes.**

This respondent read this instruction before he began to fill out the questionnaire, but he forgot exactly what it said when he reached Teacher 8 to whom it applied, so he went back, found this instruction, and re-read it. However, he only read as far as "mark (X) in the appropriate column" and then he went on to read the next instruction, which gave him the impression that he was to mark (X)'s in both sections.

Of all of the instructions, respondents had difficulty understanding the instruction in paragraph 5 the most:

> **"If an elementary teacher teaches a departmental class, e.g., music, art, reading, math, or science, mark "x" in column (h) other, under elementary. Mark general elementary only for elementary teachers who teach in self-contained classes, i.e., teach the same class of students all day or most of the day."**

Respondents' misunderstanding of this instruction is probably not a simple matter of misunderstanding this instruction alone, but the result of (1) mixed messages coming from different sources on the questionnaire and (2) the fact that elementary schools are instructed to report similar kinds of information as secondary schools in categories that are labeled differently. To begin with, the instruction in the third paragraph says "If a teacher teaches only students in grade 6 or below, mark the appropriate subject column under "Elementary." This paragraph is written in parallel structure to the preceding paragraph when it says to "mark the appropriate **subject** column under "Elementary." The problem with this construction, however, is that there are no **subject** columns under "Elementary," at least not subject columns like there are under "Secondary." Only the columns "general elementary, special education, and other" are provided. In comparison, the secondary section contains what are clearly subject columns, like "math, science, and English."

This is especially confusing for respondents who find themselves in the unenviable position of having to report under both the elementary and secondary sections. Since the headings of these sections are not the same, respondents are required to report the same kinds of information under different headings. For instance, a sixth grade science teacher would be reported in (h) other, whereas a seventh grade science teacher would NOT be reported in the corresponding column (o) other, but in the science column (j).

One respondent incorrectly reported an elementary/middle school science teacher in the "special education" column in the elementary section. The

respondent said that he was reporting the science teacher in this column because she taught more than one grade of science. She taught science to second, third, fourth, fifth, and sixth grade. After the respondent incorrectly reported the teacher, he turned back to the instructions for guidance. It is impossible to tell from what the respondent said if he turned back to the instructions because of the interviewer's probing, but the interviewer suspected so. The respondent read the instruction "If an elementary teacher teaches a departmental class, music, science, etc." and discovered his mistake. He then put his mark under "other" in the elementary section.

It appeared to the interviewer, although the respondent never said this, that the respondent had quickly ruled out the "general elementary" column, which left either the "special education" or the "other" category. The interviewer speculated that the respondent did not think that science should be classified as "other," especially since the respondent knew from previous experience that there was a "science" category on the secondary side. The interviewer thought that the respondent ruled out the categories "general elementary" and "other" and by a process of elimination decided upon the category "special education."

Another respondent was also clearly influenced by the secondary columns, although this respondent came to the opposite conclusion as the previous one. This respondent began by correctly reporting two sixth-grade subject-matter teachers as "other" teachers on the elementary side. However, after he next reported a secondary teacher, the respondent became confused about how to report his elementary teachers, and from that point onward, he made the mistake of reporting what were essentially sixth-grade subject-matter teachers as "general elementary" teachers. The reasons for this in the respondent's words were:

1. "I'm looking back on page 3.. I don't see anything there that will help me." [The respondent is referring to choosing between columns (f) or (h).];

2. "...they have elementary, special education and other. Both of those ladies would, in my opinion, be considered to be 'general education' rather than 'other.' I would think that 'other' category might apply if they were a music specialist or some other type of specialist that worked at the sixth grade level, not teaching math, science, social studies, or language arts. That's what I consider to be general elementary."

It is only normal that once a respondent has reported a secondary subject matter teacher under one of the subject matter headings, because of what is known as top-down processing, they would expect to do the same in the elementary section (or vice versa). In general, top-down processing lends efficiency to our ability to interpret stimuli. It enables us to quickly perceive our world with less effort by placing what are usually well-founded expectations upon it from past experiences. However, a break-down in this system is likely to occur when the world deviates from our expectations, as it

did for the respondents above. When this occurred, different respondents opted for different columns for different reasons.

Looking again at paragraph 5, one notices that the important instruction "mark (X) in column (h) ("Other") under Elementary" can be lost. This might happen because the respondents assume that the second line is nothing but examples, all of which appear to be separated by commas. If so, their eyes may drop to the capitalized verb "Mark," with the result of giving the wrong instruction: "Mark "General elementary." The above respondent did report nearly all of his sixth grade departmentalized teachers under the "General elementary" column.

In addition, there is a discrepancy between the way the answer columns in the table are organized compared to this paragraph. The answer columns in the table are organized as follows: "general education," followed by "special education," then "other." This paragraph, however, discusses the "other" category first, followed by "general elementary." There was at least one respondent who looked for an instruction telling her how to report the bulk of her elementary teachers (by which she meant her general elementary teachers), but who could not find the appropriate instruction because it is buried at the end of this paragraph. Moreover, the paragraph is incomplete because it never mentions "special education."

Finally, many respondents questioned what we meant by the instruction in paragraph 7:

> **"If a secondary teacher teaches two subjects equally, mark the column for the subject the teacher is most qualified to teach."**

There were difficulties determining which subject the teacher was most qualified to teach. Respondents often indicated that teachers can have certificates in more than one subject, which means that the teachers were equally qualified to teach any of these subjects. In this case respondents were left without a decision-making criterion to guide them in their choice, and this bothered them. As a result, a few respondents marked "X"s in more than one column.

These respondents took the word "qualified" to mean "certified." However, one respondent pointed out that "qualified" can mean something different from "certified." Certified implies that the teacher has more concentration in formal learning in certain fields. Qualified can have that meaning, or it can refer to whatever subject/skill the principal feels the teacher is best at, whether that skill stems from formal training or personal interest. When queried, this respondent, similar to the others, interpreted "qualified" to mean "what their license says."

One private school respondent had a special problem because there was not an equivalent instruction about what to do if an <u>elementary</u> teacher taught two or more "subjects" equally. This respondent had a teacher that taught first grade all morning, but in the afternoon the teacher taught French to grades 1, 2, and 3, as well as religion. This respondent decided to put an "X" in the "general elementary" column, and a "?" in the "other" column. It truly was

unclear how this teacher should have been reported.

Another private combination school had a similar kind of problem in that there was not an instruction about what to do if a teacher taught at both the elementary and secondary level equally. This respondent filled out the form quite well, until he reached Teacher 4, who taught both 6th and 7th grade. The previous teachers had been easy to categorize, since they exclusively taught self-contained classes in the elementary grades. But when it came to Teacher 4, the respondent first marked an "X" under the other column (h) in the elementary section, but then questioned whether this was correct. He seemed to be confused because Teacher 4 did not teach a self-contained class. He went back to the instruction to find out what to do. At first, he read what to do if the teacher taught students only in 7th grade or above, and ruled out this instruction. He then read the instruction about what to do if the teacher taught students only in 6th grade or below, and as with the previous instruction, ruled this out. Then he read what to do if the teacher taught both elementary and secondary and learned that the decision rule was to mark the level (elementary or secondary) at which the teacher teaches the greater number of classes. This posed a problem, however, because he said that the teacher taught at both levels equally. The respondent decided to keep the "X" under column (f). He then noted the fact that the instruction said **"Mark (x) in ONLY ONE of the columns (f) through (o)."** He did not agree with this, however, because he said: "So I either mark her down under all of those, or mark "other" and let you guess." After saying this, he went on to put an "X" in columns (i), (j), and (k) to signify the fact that this teacher taught "math, science, and english" to 7th graders.

When done reading the instructions, one respondent mistakenly declared that she did not need to worry about "secondary," although she had 7th and 8th grade students at her school. This suggests that the instructions were not enough to change her definition for secondary from 9th grade and above to the form's definition of 7th grade and above. In other cases, respondents recognized that the form's definition differed from theirs, but wondered why.

Instruction 2--Teacher Listing Instruction at the Top of Page 4

Discussed earlier along with the cover page.

Include-Exclude List

For the most part, this list was beneficial. Generally, respondents either fully read or at least skimmed through the list before beginning to answer the questionnaire, and they returned to it as necessary (although one respondent completely ignored the list until he was in the process of listing the teachers, at which point he found himself in need of guidance). There were, however, a number of ambiguities with the list that need to be corrected.

To begin with, respondents had difficulty determining why certain kinds of teachers were listed (e.g., art and physical education teachers) and not others (e.g., foreign language teachers). This often made them question if they were supposed to include teachers like the foreign language teachers.

This problem was exacerbated by the fact that foreign language teachers are also not listed in the table headings, whereas some categories of teachers are, like English and science teachers. This meant that respondents needed to spend time determining that a teacher like a foreign language teacher simply fell under the heading of full- or part-time teacher in the Include/Exclude List. Then they had to determine that this kind of teacher would be reported under "other" in the table.

Respondents had difficulties understanding what was meant by "a regularly scheduled class, " especially when it came to librarians and speech therapists, and thus they often erroneously included them. Since this phrase is clearly pivotal to determining whether many school personnel get listed, it needs to be made clear. According to respondents, librarians sometimes go into "regularly scheduled" classes to instruct them in library skills. The same with speech therapists. As one respondent put it, the speech therapist did not teach whole classes, but sometimes she went into the regular classroom and taught that class. The respondent explained that the speech therapist worked with the speech kids within the group of the regular class. Respondents wondered if that counted.

One respondent had difficulty reporting, as he put it, a person who coached one class during the season. The respondent reported this person as an "other" teacher in the secondary section, but the respondent recommended that the instructions be made more specific about how we wish to treat people who actually do not teach in the classroom. Later on, the respondent reported another coach.

Finally, respondents wondered if the word "class" excluded individual instruction. As a result, they wondered if the speech therapist who often works with individual students should be excluded. A common theme running through all of these situations is that respondents are wondering if physically being in a classroom is the defining characteristic here.

At least a couple of respondents had difficulties with the opposite instructions **"Include on the list persons who teach a regularly scheduled class but whose main assignment is:"** and **"Omit from the list persons who do not teach any regularly scheduled classes and whose main assignment is:"**. They either seemed to feel that the replication was a waste of their time and/or they had difficulties distinguishing between the two statements. At least one respondent thought that the one list said to report the librarian, etc., the other said not to. Distinguishing between these two statements requires focusing on the "who teach/do not teach" part of the statement rather than the "whose main assignment is" part, and some respondents had trouble with this.

In addition to the overall "include" statement being confusing, the use of the subordinate conjunction "but" may be inappropriate. More often than not the survey was being conducted with the principal, who was the top person. (Does not the questionnaire acknowledge this by listing "Principal" first in the list?) The way the statement is worded essentially makes the principal job secondary to the teaching one. That is, "teach..., but a principal," not "and a principal" nor "principal and teach." The difference is subtle, but

probably worth noting. It may be confusing that "principal" would be subordinate to "teacher."

Also, there was difficulty determining what was meant by "special education." One private school respondent looked for and remarked that there was not a definition for "special education." With probing, the respondent gave as an example the reading remedial specialist. With further probing, he said that special education might mean "special teachers who are there because of special education programs." He pointed out that there was a difference between someone who signs for a hearing impaired child and someone who is simply spending more time with a child who needs some special attention to read. He seemed to have trouble determining if we meant one of these over the other. He went on to explain that his special teachers may spend something like thirty minutes or so drilling and giving special attention in reading. He wondered if this was enough to qualify them as special education teachers. He compared this activity with the training of children who are dyslexic or who have a learning problem, like those in public schools. In the end, he decided to report the remedial reading teacher in the special education category.

However, another respondent reported his learning disabilities teachers as "general elementary" teachers because they taught self-contained classes. No doubt this occurred because a definition for special education was not provided on the questionnaire and because the instructions specifically say that if a teacher teaches a self-contained class they should be reported as "general elementary" teachers. If "special education" teachers are supposed to be an exception to this rule, it is not specified.

Still another respondent debated whether to report the teacher of gifted and talented students under special education. The respondent pointed out that the gifted and talented program is part of the exceptional program, but it is generally not considered special education. In the end, the respondent decided to report the gifted and talented teacher under "other."

Finally, a few respondents mentioned not knowing what itinerant or satellite teachers were. The way in which these categories are grouped separately on the page suggests that these are two different kinds of teachers, when in fact they are varying names for the same thing. This is an example of the Gestalt Grouping Laws in operation, whereby respondents are relying upon the visual element of location to provide them with meaningful information. Their mistake--which of course is not really their mistake, but ours--stems from the fact that the visual grouping is misleading.

There was a little confusion over "long-term substitute teachers." One principal did not "currently" have a long-term sub, but had just had one for a teacher on maternity leave and planned on having one again for another teacher going on maternity leave. The principal wondered if he was supposed to report these teachers, but decided not to. The same thing happened with another principal, only this principal decided to include the non-current long-term sub.

The Table, Beginning on Page 5

When respondents get to the table on page 5, they are first asked to enter the month and day school will close. Then they are asked to fill out a table in which they are supposed to report the teachers' names (in column b), race/ethnicity (in column c), total years in teaching (in column d), whether the teachers are bilingual (in column e), and then the grade level and subject taught by the teachers (in columns f through o).

We have decided to skip over the date school closes and columns (b) through (e) temporarily. Instead, we begin by discussing respondents' overall listing strategies. After that, we discuss the errors that arose as respondents tried to fill in columns (f) through (o). The reason we begin like this is because this information is conceptually connected to the instructions on pages 3 and 4, which we have just reviewed. When we are done with these aspects of the listing operation, we come back and talk more specifically about columns (b) through (e).

Listing Strategies

Whether working from a master schedule or from memory, respondents often wondered if they were supposed to list teachers alphabetically, or by grade level or subject. About one-third of the respondents reported their teachers from memory by grade level or subject. These respondents were relieved that there was not an instruction telling them that they needed to report their teachers alphabetically because it turned out that this information was stored in memory by grade level or subject.

The remaining two-thirds of the respondents worked from master schedules. A few of these had two schedules, one arranged alphabetically, the other by grade level or department. The majority of the respondents that worked from a schedule decided to list the teachers alphabetically, which turned out to be less efficient than when respondents listed them by grade levels or departments. This is because the respondent had to move back and forth between columns (f) through (o), constantly repeating the columns and looking for the right one, whereas respondents reporting by departments could move more efficiently down the page, marking one column for awhile before moving on to the next one. Another advantage of working from a schedule that was arranged by department was that respondents could often skip over groups of people who were to be excluded from our list (e.g., teacher aides), rather than having to identify each respondent's position and then individually exclude them as they went along.

Most respondents filled out the matrix by working across one row at a time, then moving to the next row, etc. However, three respondents worked down the columns, first listing all of the teachers, then reporting their race/ethnicity, etc.

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Grade Level Mismatch

One of the largest problems with the table came from the mismatch between the form's definition for elementary and secondary grade levels and the respondents' definitions. The form defines an elementary school as containing kindergarten through sixth grade and a secondary school as seventh through twelfth grades. However, most of the schools in our study defined elementary school as kindergarten through fifth grade, middle school as sixth through eighth grade, and secondary school as ninth through twelfth grades.

The middle schools in particular had difficulty determining how they should report their teachers because of the effort required to determine "the level at which the teacher taught the greater number of classes." As noted earlier, one respondent understood this instruction, but had a problem anyway because the teacher taught at both levels equally. He decided to mark more than one column. Another misunderstood the instruction. As a result, he put "X"s in more than one column. It is worth noting, however, that even when respondents understood this instruction, they struggled with this task.

Misreporting of Teachers

It is fair to say that most respondents reported the majority of their teachers properly. Not surprisingly, these were the full-time classroom teachers--those who taught grades 1 through 5 or subjects in the higher grades, no doubt because these are unambiguously teachers (by practically anyone's definition). However, this is not to say that respondents did not have trouble reporting their staff. As can be surmised from what we have written up to this point, nearly every, if not all respondents, questioned whether or not they were supposed to report one or more of their staff. Respondents questioned whether to report the librarian probably more than any other person on staff, but they also questioned whether to report speech therapists, guidance counselors, extended enrichment staff, ESL teachers, foreign language teachers, coaches, remedial reading specialists, LD teachers, teachers of "ungraded" classes, junior kindergarten teachers, teachers for the visually impaired and the hearing impaired, volunteer teachers, and teachers who only taught a little bit (e.g., one respondent had a teacher who taught art a little bit of the time, but was a kindergarten assistant the majority of the time).

Perhaps we can learn something from one of our respondents, who had a list which categorized her employees. There were four major categories on her list: grade-level teachers, a specialist team, a resource team, and other staff. The respondent did not have any difficulty knowing to report the grade-level teachers or, for the most part, to omit the other staff. It was the specialist team and resource teams, as well as the itinerant staff in the other category that gave her the most trouble. The specialist team included the phys. ed., media, and instrumental music staff, all of whom she reported as teachers. The resource team included the special education and integrated language arts

staff, who again she reported. The other category included the instructional assistants, cafeteria staff, and itinerant staff. The itinerant staff included the psychologist, the people personnel worker, and the extended enrichment person. Of these, the respondent reported the extended enrichment person.

Table Headings

A number of respondents had difficulty filling out columns (f) through (o) when they reached the odd-numbered pages because the headings were so far from where they were working.

Month and Day School Closes

There were quite a few problems with this item. One respondent overlooked it, perhaps because it is sandwiched between what are essentially the most important parts of the questionnaire: (1) instructions for listing the teachers, and (2) the area for actually listing the teachers. And to make matters worse it is conceptually unrelated. Although this is not the sort of thing respondents are likely to mention, it is distracting (and therefore, potentially harmful) that we physically ask this question here.

In addition, respondents had some difficulties interpreting this question. One respondent interpreted day to be "day of the week," so she wrote in "Friday." But by far the largest problem was that respondents wondered if this question was asking them for the day school closed for the students or for the teachers, which were different times. Teachers often had in-service days beyond the students. Also, in one school, kindergarten ended a few days earlier than grades 1 through 6. Most respondents decided the question was referring to the grade-level students, but at least one reported the day school closed for teachers.

Boxes 1 and 2

Many respondents questioned the meaning of these boxes. At first, quite a few respondents were convinced that they had overlooked some instruction telling them how to fill out these boxes. Usually this gave them slight pause until they figured out that the boxes must not pertain to them. Surely, this is a waste of the respondent's time. Also, some respondents never did figure out what the boxes pertained to, but did not know what to do with them, so they skipped over them. One respondent said that he would return, (presumably when he had more knowledge about what to do with them), but he never did.

Columns (a) and (b)--Line number and Name of Teacher?

A couple of respondents ignored the instruction to provide the teacher's last name first, and one respondent misunderstood the line numbers to the left of the name column. She took them to mean grade level, so for instance, she reported the first grade teacher on line 1, the second grade teacher on line 2, etc. When she was done with the grade-level teachers, she reported the other teachers, like the art teacher, but because of the way she had been using the line numbers as cues, she forgot to report the kindergarten teacher.

Also, one respondent could not report the last names of the Sisters who taught because she did not know them, and one respondent wanted to know if he should print the names.

Column (c)--Race/Ethnicity?

This item did not pose many problems with our respondents because most of the teachers in the areas we interviewed were white, with a few blacks and Hispanics. One respondent accidently wrote in "1"s rather than "5"s to indicate white. She just assumed that the predominate race (white) would be listed first. At some point, she realized her mistake and converted the "1"s to "5"s.

Column (d)--New Teachers?

There were a number of problems with this item, the greatest of which was that a number of respondents neglected to think in terms of a teacher's total years in the teaching profession "at all schools" when they first began to fill out the questionnaire. Again, one reason for this may be that the respondent's situation came to mind first. Most respondents, however, caught their mistake. One respondent mentioned that state reports ask for teaching experience at all schools too. Perhaps this is why respondents tended to realize their mistakes at some point.

In addition, there were a number of other problems with this item. For one, a couple of respondents put "X"s in this column rather than "N"s, more than likely because up till this point the instructions had been saying to mark "X"s. This would be another example of top-down processing at work. In addition, a couple of respondents had difficulty understanding the phrase "not counting this school year." Another had difficulty with the phrase "if a teacher is less than 3 years at any school." Still another had difficulty determining if this question was asking for state or national figures. And still another wondered if she should include college teaching when determining the teacher's total teaching experience. One respondent had difficulty determining the teacher's total teaching experience because the teacher's length of teaching included interrupted service. And finally, one respondent was unable to answer this question for teachers who were not home-based at his school.

Column (e)--Bilingual/ESL/ESOL?

As with the race/ethnicity item, respondents did not seem to have too many problems understanding this item, mainly because the respondents in our sample did not offer these programs. However, one respondent misread the note at the bottom of this item. The note reads: "Do not include regular foreign language teachers as Bilingual, ESL, or ESOL teachers." However, this respondent simply read this note as "Do not include foreign language teachers." As a result, she erroneously omitted her foreign language teacher from the list.

V. Recommendations

For the rest of this report, the question numbers correspond to the revised questions, not the ones on the current form.

Cover Page and Screening Questions

The questionnaire should be reorganized so that important conceptual information is NOT interrupted by unrelated information, which is both distracting and potentially harmful, and so that it makes more sense, both verbally and non-verbally. The questions should begin on page two rather than three. Rather than being double banked, they should run down the page vertically.

The very important note from the cover page needs to be made more prominent. One way to do this is to combine this instruction with what are now items 1 through 3. It has been our experience that respondents tend to read information marked by question numbers. Also, the cognitive interviews showed that respondents need to understand the purpose of the screener questions, so we recommend the following:

1. **To assure that we have sent this form to a school, rather than to a school district or an administrative unit within a school district, please read and answer the questions below.**

2. **Is the institution named on the cover page a school?**

   [ ] Yes
   [ ] No

   If you answered "No," it is very important that you call the Census Bureau toll-free at 1-800-851-2014. Otherwise, go to 3.

3. **Is the grade range listed on the cover page correct?**

   [ ] Yes
   [ ] No

   If you answered "No," it is very important that you call the Census Bureau toll-free at 1-800-851-2014. Otherwise, go to 4.

The above questions are framed such that respondents are expected to say "yes," which is in keeping with their natural tendencies. Also, they are based on the assumption that school districts and units within school districts are more likely to know that they are not schools than vice versa, especially after being given the above introduction.

More importantly, the original item 1, which was very hard for respondents to understand, has now been subsumed by the new question 3. Are we not right in assuming that an all-prekindergarten, -kindergarten, or -postsecondary school would never have been listed on the cover page as such?

If a respondent says "yes" in response to the new question 3, then we can assume they do not have ONLY prekindergarten, kindergarten, or postsecondary students, that they are who we thought they were. If they say "no," then we want to speak with them to find out if they are out-of-scope, have different definitions of their school than we do, or have changed since we last listed them.

Finally, these questions use the same skip instruction as used on the Teacher Questionnaire, which we think respondents may execute relatively well compared to other skip instructions (However, please note: This information is preliminary. The final results are forthcoming in a report that evaluates the Teacher Questionnaire).

It would probably be a good idea to replace the note to call the Census Bureau if the school's grade range differs on the cover page with the **"Note: Please return this form within 2 weeks in the enclosed envelope."** Ordinarily, we would have recommended that this instruction be put at the end of the questionnaire, but respondents stop listing at various points along the way, depending upon the number of teachers at their school, so there is no clear end to this questionnaire.

The question concerning the month and day school closes should become item 4. This question needs to include a reference to the date school is expected to close for students, if that is the date we want. If not, then it needs to include a reference for teachers. Also, it should say "date" rather than "day," since some respondents take "day" to mean "day of the week," like Monday or Tuesday.

4. **What month and date will school close for students at the end of the 1993-1994 school year?**

Boxes 1 and 2 should be deleted and the respondent's name should become item 5. With regard to item 5, we suggest clearly specifying the information we are after, as well as providing a brief explanation as to why we are asking for this information. Most importantly, we need to make sure that respondents can tell exactly where they are supposed to write the information we request, since this was the largest problem with this item in the interviews.

5. **In case we have questions about any of your responses, please print your name, title, and work telephone number on the lines below.**

Your name: _____

Title: _____

Work Telephone Number: (____) _____
Area Code

Also, we recommend continuing to follow the name item with the instruction to call the Census Bureau if respondents need assistance, similar

to the way it is now in the questionnaire. Respondents just got finished telling us their name and telephone number, so it seems like this is the appropriate place for us to tell them ours and to offer our assistance.

6. **If you need assistance filling out the rest of this form, please call the Census Bureau toll free at 1-800-851-2014.**

Listing Instructions

What is now Instruction 1 (column reporting) and Instruction 2 (the list) should be reversed. This is because, operationally, respondents need to carry out Instruction 2 first: they need to determine who to list. After they have determined who to list, then they need to determine how they should be reported in columns (f) General Elementary through (o) Other. Rather than starting over with the number one as the current form does, the instructions should just continue in the same number sequence. What is now instruction 2 will become items 7 and 8, and what is now instruction 1 will become item 9. The new items 7 and 8 should be put on page 3, and the new item 9 on page 4.

At this point, we should not tell respondents to report the teachers in the grade range shown on the cover page because that information may be wrong. So long as the screener questions work and respondents call the Census Bureau if their grade ranges differ from what is listed on the cover page, then Item 7 should be:

7. **Please read items 8 and 9 below, then list and categorize the full- and part-time teachers at this school in the table on page 5.**

A possible advantage of this reorganization is that the first set of instructions respondents come across will be the easier-to-process list, which may not turn them off as much as the dense and detailed instructions they now encounter first. However, a disadvantage of this reorganization may be that the list, which was easy for respondents to refer to, will no longer be directly in front of them at the beginning of the listing process (i.e., when they are on page 5) the way it was when it was located on page 4. Because of this, we considered recommending a fold-out page, so that both sets of instructions could be above the table and in front of respondents, at least at the beginning of the listing process, and we even considered having a separate sheet of instructions that respondents could keep in front of them at all times, but we decided that both of these recommendations would create more problems than they solve. In the case of the fold-out, the column instructions will be covered once respondents turn the page and it will probably end up being clumsy and burdensome for respondents to handle anyway. And with regard to the separate sheet, respondents are likely to ignore or lose it.

At this point in our thinking, we believe that one of the best ways of keeping respondents from overlooking or ignoring important information may be to first make certain that the information flows from a logical standpoint and then to sequentially move them through the information with the use of item

numbers. Therefore, in item 7 above, we direct respondents' attention to the two very important sets of instructions that follow (in items 8 and 9), before telling them about the table on page 5.

A revised version of the include/exclude list is presented below in item 8. After the list, we discuss in detail the changes we made to the original list and why.

8. **INCLUDE ON THE LIST**

Special Education Teachers
meaning those who teach the emotionally disturbed, mentally retarded, speech/language impaired, hearing impaired visually handicapped, orthopedically impaired, mildly and severely handicapped, learning disabled, etc.

General Elementary Teachers
1. meaning those who teach in self-contained classes, i.e., teach the same class of students all or most of the day, unless they teach special education students, in which case see the category above
2. include kindergarten teachers

Math Teachers
Science Teachers
English/Language Arts Teachers
Social Studies Teachers
Vocational-Technical Education Teachers
Other Subject-Matter Teachers
1. meaning those who teach art, foreign languages, music, physical education, English as a second language, and any other remaining subjects
2. include those who teach a remedial reading class
3. include those who teach the gifted and talented

ALSO, REMEMBER TO INCLUDE AND CATEGORIZE

Teaching Principals, Teaching Guidance Counselors, Teaching Speech Therapists, Teaching Librarians, Teaching Psychologists, and Teaching School Nurses
1. this includes any staff member who teaches at least one class per week
2. for example:
   if **librarians** teach a class in informational science once a week, they would be included in the "other" category, but if they teach library skills once a year or if they go into other classes to teach library skills, they would NOT be included on the form
   if **speech therapists** teach a class in remedial reading once a week, they would be included in the "other" category, but if they tutor an individual child or children who need extra help learning to read, they would NOT be

included on the form

Teachers of Ungraded Students

1. meaning those who teach ungraded students who, at least in part, are comparable in age to the students the school was designed to serve;
2. for example:
   if a middle school has a class that contains ungraded students who range in age from 12 to 19 years old, this teacher would be included
3. report these as "other" teachers, unless they teach special education students, in which case report them in the "special education" category

Itinerant, Co-op, Traveling, and Satellite Teachers
meaning those who teach at more than one school

Current Long-Term Substitute Teachers
meaning those who are currently filling the role of a regular teacher for 4 weeks or more

OMIT FROM THE LIST

Teacher aides
Prekindergarten Teachers
so long as they teach ONLY prekindergarten students
Postsecondary and Adult Education Teachers
so long as they teach ONLY postsecondary and adult education students
Short-term Substitute Teachers
meaning those who fill the role of a regular teacher for less than 4 weeks
Student Teachers
Day Care Aides

Because of the space constraints we are facing here, we simply continued the omit list down the page after the include list, but we really suggest that the omit list be double banked, the way it is now in the questionnaire.

We have designed the include/exclude list so that it will perfectly correspond with what we envision as the table. Since the references to full- and part-time teachers do not correspond with the categories provided in the table, we moved them. In truth, everyone falls into the full- or part-time categories, so we put this reference where we actually want a global reference: in the question itself (Q7).

Furthermore, we suggest that the "special education" category be provided first, both in the list and in the table. This is because respondents are not likely to mistakenly report their general elementary teachers, or any of their other teachers for that matter, as special education teachers (as they are presently doing), <u>if</u> they have first read the definition for special education teachers. The opposite is not true, however, since the definition provided for general elementary teachers (teach the same class of students all or most of the day) can also apply to special education teachers. It is not classroom

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structure that differentiates the two, but the populations to which they teach, and respondents need to be made aware of this.

The above list is also much more comprehensive than the original list. It mentions all of the categories in the table, plus it better defines the more troublesome areas: the "special education," "general elementary," and the "other" category. We did not bother to elaborate on the categories respondents did not seem to have much problem defining for themselves, like math, science, social studies, and English.

Finally, we tried a different approach to listing the "other" teaching staff. In the first part of the list (Include on the List), we try to get respondents to think about and categorize what even they have little difficulty recognizing as their teachers. (For the most part, their difficulties with these teachers were with how to categorize them according to our definitions, which is why we tried to provide more comprehensive definitions.)

After this, we come along and remind respondents to include other teaching staff they may not have originally thought about, the teaching principals, etc. Also, we reworded the way we ask for this information. We tried not to repeat subtly different information in both the include and exclude list, especially the "who teach" and "who do not teach" phrases. Instead, we simply said to report Teaching Principals and the like in the "include" list, but we didn't mention the corollary. On the one hand, we are afraid that if we tell respondents not to report principals and the like in the omit list, this information may be more readily seen and misunderstood by respondents. However, it should be noted that we are torn over this. We also are concerned that respondents may be confused by the fact that the omit list doesn't inclusively cover all of the more common non-teaching staff, such as the principals, etc. However, in the end, we have decided to omit them in the belief that respondents are more likely to recognize that non-teaching principals are NOT teachers than they are to recognize that teaching principals ARE teachers. This is because in the latter case, the teaching position is often secondary to the other position, and therefore, more likely to be forgotten. Although redundant, we repeated the word teaching with each of the categories to clarify that all of the staff listed need to be teaching, not just the principals.

Since many respondents had difficulty determining whether or not to report librarians and speech therapists, we included specific examples regarding them. We are not married to the wording of our examples, just to the notion that examples need to be provided that more explicitly help respondents understand how to report.

Finally, respondents need a very specific definition of what we mean by part-time teaching, whether it be the one we used "who teach at least one class per week," or it be some other definition. This definition is given in the first entry under the Teaching Principals, etc., category.

Now, because columns (f) through (o) are conceptually related to the instructions; because, next to the names, this is the information we are most

after; and because these columns take greater thought on the part of the respondents, we recommend that these columns be switched with columns (c) Race/Ethnicity, (d) New, and (e) Bilingual/ESL/ESOL. We also wonder if the Race/Ethnicity question should come last because it has the weakest link to teaching itself.

We also strongly recommend that the questionnaire be redesigned to ask for information in a way that more closely resembles reality for respondents. As it is now, middle or combination schools have a lot of difficulty providing information in the format we ask for. It would be much better for them if we could break the data into three sections--Elementary School (K-5), Middle School (6-8), and Secondary School (9-12)--and collapse the data later to fit our needs.

Even if the table can not be redesigned with three sections rather than two, still it is very important that each of the sections contain exactly the same categories, with two exceptions: the elementary section would not have the "vocational-education" section and the secondary school would not have a "general education" category. If the categories are duplicated, as we suggest, it may be necessary to widen the questionnaire using 8" x 14" paper because there will be 14 subject matter columns rather than the 10 that are on the form now.

Another option would be to ask two separate questions. In the first, respondents would classify the teacher by grade range, and in the second, they would classify the teacher by subject matter. The advantage of this method is that it only requires 10 columns as opposed to 14 mentioned above. It would look something like this:

	Grade Range		Subject Matter Taught				
...	Elementary K-6	Secondary 7-12	Elem.	Sp.Ed.	Math	Science...	Other
	(c)	(d)	(e)	(f)	(g)	(h)	(i)

In any event, the instructions that are now on page 3 need to be reworded. Under the first proposal above (asking for duplicate information), item 9 would become:

9. **How are columns (c) through (p) completed?**

The instructions that follow this question should be broken into three sections: (1) those that apply to elementary teachers, (2) those that apply to secondary teachers and (3) those that apply to both, so that respondents can easily find the section that applies to them. Also, many of the instructions, like the one telling respondents when to mark the "general elementary" column, can be eliminated because this information has been moved to the include/exclude list.

Looking back at the interviews, we learned that respondents either reported all of the subjects teachers were equally qualified to teach, or they agonized over making this decision. This leads us to propose two ways of asking respondents to report this information. As it is now, we tell respondents to choose the subject the teacher is most qualified to teach. One would not expect this to be difficult, but it is. One option, and the one we are recommending at this point, is to give respondents a decision rule they may be able to abide by: to just arbitrarily choose one of the subjects over the other(s). This is presented under the first option below.

If further research demonstrates that respondents continue to mark more than one subject regardless of the decision rule we give them, then it will probably be necessary to go with their natural tendencies to report all of the subjects teachers are equally qualified to teach. Instructions appropriate for this tendency are given under the second option below. The advantage of this option is that respondents need not make any decisions about which subjects to report. We can always randomly choose one of the subjects after data capture. However, the success of this method depends on respondents recognizing that we want them to mark only one box if teachers teach more than one subject for which they are NOT equally qualified. Knowing how respondents want to report everything, this too may be a problem.

Regardless of the option used, we suggest that the information be presented in typographical chunks, as done below. Typographically grouping the information may help respondents decipher the rather difficult, nested nature of these instructions.

First Option:

Elementary Teachers (K-6)

If a teacher teaches only students in grade 6 or below:

mark one and only one "X" under Elementary in the subject taught MOST by the teacher,

unless the teacher teaches two or more elementary subjects EQUALLY, in which case arbitrarily choose one of the subjects over the other(s) and mark an "X" in it.

Secondary Teachers (7-12)

If a teacher teaches only students in grade 7 or above:

mark one and only one "X" under Secondary in the subject taught MOST by the teacher,

unless the teacher teaches two or more secondary subjects EQUALLY, in which case arbitrarily choose one of the subjects over the other(s) and mark an "X" in it.

Teachers at Both Elementary (K-6) and Secondary (7-12) Levels

If a teacher teaches both elementary and secondary students at

this school:

mark one and only one "X" under either Elementary or Secondary in the subject the teacher teaches MOST,

unless the teacher teaches two or more subjects EQUALLY, in which case arbitrarily choose one of the subjects over the other(s) and mark an "X" in it.

Second option:

Elementary Teachers (K-6)
If a teacher teaches only students in grade 6 or below:

mark one and only one "X" under Elementary in the subject taught MOST by the teacher,

unless the teacher teaches two or more elementary subjects EQUALLY, in which case mark an "X" in all of the subjects the teacher teaches EQUALLY.

Secondary Teachers (7-12)
If a teacher teaches only students in grade 7 or above:

mark one and only one "X" under Secondary in the subject taught most by the teacher,

unless the teacher teaches two or more secondary subjects EQUALLY, in which case mark an "X" in all of the subjects the teacher teaches EQUALLY.

Teachers at Both Elementary (K-6) and Secondary (7-12) Levels
If a teacher teaches both elementary and secondary students:

mark one and only one "X" under either Elementary or Secondary in the subject the teacher teaches MOST,

unless the teacher teaches two or more subjects EQUALLY, in which case mark an "X" in all of the subjects the teacher teaches EQUALLY.

Month and Day School Closes

As mentioned earlier, the question concerning the month and day school closes needs to be moved because it is conceptually unrelated to the listing activity. In its place we suggest providing an instruction that elucidates a question respondents often had about whether they were supposed to list the teachers alphabetically. This is in keeping with the notion of good information organization, for this is the point when respondents actually begin to write down the names. We suggest the following:

In the table below, list the teachers alphabetically, by grade, or by department--whatever is easiest for you.

The instruction to report the month and day school closes is now in bold, while the rest of the table is not. We do not think that the listing instruction should be put in any bolder type than the column headings.

Columns (a) and (b)--Line number and Name of Teacher

The heading in column b should be made larger and it should tell respondents to print, since they questioned this.

Print Last Name, then First Name of Teacher

Column (c)--Race/Ethnicity

Since we are suggesting that this column be moved to the right of the subject columns, we may want to re-label it **"Teacher's Race/Ethnicity"** to clarify that we are talking about the teachers and not students, just in case respondents begin to think in terms of the students as a result of answering the subject columns.

Column (d)--New Teachers

This instruction should say Enter an "X" rather than Enter an "N."

Columns (f) through (o)

The current column heading "Mark (X) in ONLY ONE of columns (f) through (o)" is actually an instruction and not a descriptive heading. The heading should read **"School Level and Subject Taught by Each Teacher."** The "Mark (X) in Only One of columns (f) through (o)" should be placed beneath the column headings so that respondents don't overlook it. This way their eyes should pass over the instruction when they move from the heading to where the the "X" goes. Perhaps this will help keep respondents from reporting more than one "X."

Also, we suggest repeating the column titles (like Name, General elementary...Bilingual/ESL/ESOL) at the top of the odd-numbered pages. We are not talking about the entire heading, just enough of the heading that respondents need not go back so far to stay properly aligned.

VI. Conclusion

We have made a number of recommendations that would substantially change the listing form's present structure. We have based these recommendations on the results of cognitive research with the present form. However, when combined, our recommendations may change the questionnaire in ways we could not anticipate. Also, there are a number of places throughout the report in which we discuss the pros and cons of our recommendations. Take, for instance, the include/exclude instruction. We know respondents are having difficulty accurately determining who to report as teachers. We also know

that respondents' initial reactions to the Teacher Listing Form were that it looked burdensome. After filling it out, most respondents remarked that they did not think it was nearly as burdensome as they first thought it would be. Since respondents had so many problems correctly reporting their teachers, we made the include/exclude instruction more comprehensive, which has the unfortunate negative side effect of increasing its length some. Because of this and other similar complex questionnaire design issues in which we find ourselves needing to strike a delicate balance between helping respondents answer the questionnaire correctly, while at the same time continuing to motivate them to do so, we would be amiss if we did not end this report by saying that the recommendations we make should be tested before being implemented in an actual survey.

Table 1. Number of Interviews by Type of School.

Type of School	Number Interviewed
Public	
Elementary (K-5)	3
Middle (6-8)	3
High (9-12)	3
Total	9
Private	
Combination	
1-7	1
K-8	4
8-12	1
K-12	3
High	
9-12	1
Total	10

Table 2. Number of Schools by County

County	Number
York, PA	1
Frederick, MD	5
Spotsylvania, VA	4
Richmond, VA	8

Appendix

Teacher Listing Form
for
Public and Private Schools

Schools and Staffing Survey
1993-94

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OMB No. 1850-0598: Approval Expires 12/31/94

FORM **SASS-16**
(7-21-93)

U.S. Department of Education
National Center for Education Statistics

TEACHER LISTING FORM
FOR
PUBLIC AND PRIVATE SCHOOLS

SCHOOLS AND STAFFING SURVEY
1993-94

Conducted by:

U.S. Department of Commerce
Bureau of the Census

NOTICE – This report is authorized by law (20 U.S. Code 1221e). Your answers will be kept confidential and will be used only for statistical purposes.

(Please correct any errors in name, address, and ZIP Code.)

SASS

Note: If this school's grade range differs from the grade range printed above, please call the Census Bureau toll free at 1-800-851-2014.

35

Remarks

1. Is the institution named on the cover page a school that has ONLY prekindergarten, kindergarten, and/or postsecondary students?

☐ Yes ☐ No

2. Is the institution named on the cover page a school district?

☐ Yes ☐ No

3. Is the institution named on the cover page an administrative (and not a school) unit within a school district?

☐ Yes ☐ No

If you answered "Yes" to any of the above questions, call 1-800-851-2014.

4. Your name

Title

Telephone number

Please record the current date

Read ALL instructions before listing teachers.

If you need assistance, please call the Census Bureau toll free at 1-800-851-2014.
Please return this form within 2 weeks in the enclosed envelope.

1. HOW ARE COLUMNS (f)–(o) COMPLETED?

Mark (X) in only ONE of columns (f)–(o) to indicate the school level and subject taught by the teacher.

If a teacher teaches only students in grade 7 or above, mark the appropriate subject column under "Secondary."

If a teacher teaches only students in grade 6 or below, mark the appropriate subject column under "Elementary."

If a teacher teaches both elementary and secondary students at this school, mark (X) in the appropriate column under the level (Elementary or Secondary) at which the teacher teaches the greater number of classes.

If an elementary teacher teaches a departmental class, e.g., music, art, reading, math or science, mark (X) in column (h) ("Other") under "Elementary." Mark "General elementary" only for elementary teachers who teach in self-contained classes (i.e., teach the same class of students all day or most of the day).

If a secondary teacher teaches a self-contained class, mark (X) in column (o) ("Other") under "Secondary."

If a secondary teacher teaches two or more subjects equally, mark the column for the subject the teacher is most qualified to teach.

2. Starting on page 5, list the teachers at this school who teach students **in the grade range** shown on the cover page.

INCLUDE ON THE LIST

- Full-time teachers
- Part-time teachers (including those who may teach only one class each week)
- Persons **who teach** a regularly scheduled class but whose main assignment is:

  Principal or vice principal
  Guidance counselor
  Speech therapist
  Librarian
  Psychologist
  School nurse

- Special education teachers
- Art teachers
- Physical education teachers
- Music teachers
- Vocational/technical education teachers
- Itinerant teachers (who teach at more than one school)
- Co-op, traveling and satellite teachers
- Long-term substitute teachers (fill the role of a regular teacher for 4 weeks or more)

OMIT FROM THE LIST

- Persons **who do not teach** any regularly scheduled classes and whose main assignment is:

  Principal or vice principal
  Guidance counselor
  Speech therapist
  Librarian
  Psychologist
  School nurse

- Teacher aides
- Prekindergarten teachers who teach **only** prekindergarten students
- Postsecondary and adult education teachers who teach **only** postsecondary and adult education students
- Short-term substitute teachers
- Student teachers
- Day care aides

Enter the month (April, May, or June) and day this school will close at the end of the 1993–1994 school year. →	Month	Day	1	2

Line number (a)	Name of teacher – *Last, first name* (b)	Race/Ethnicity 1–American Indian or Alaska Native 2–Asian or Pacific Islander 3–Hispanic (can be any race) 4–Black (non-Hispanic) 5–White (non-Hispanic) *Enter a code for each teacher.* (c)	New *Enter an "N" if the teacher's total years in the teaching profession at all schools and school districts (not just their current school/district) is less than 3 years, not counting this school year.* (d)	Bilingual/ESL/ESOL *Mark (X) if applicable.* Bilingual teachers use native language to varying degrees to instruct students with limited English proficiency. English as a Second Language (ESL) and English for Speakers of Other Languages (ESOL) teachers provide intensive instruction in English to students who have limited English proficiency. **Note:** *Do not include regular foreign language teachers as Bilingual, ESL, or ESOL teachers.* (e)	*Mark (X) in ONLY ONE of columns (f) through (o).*									
					ELEMENTARY K–6			SECONDARY 7–12						
					General elementary (f)	Special education (g)	Other (h)	Math (i)	Science (j)	English (k)	Social studies (l)	Vocational education (m)	Special education (n)	Other (o)
1														
2														
3														
4														
5														
6														
7														
8														
9														
10	4										4			

FORM SASS 16 (7-21-93)

Line number (a)	Name of teacher – *Last, first name* (b)	Race/Ethnicity 1-American Indian or Alaska Native 2-Asian or Pacific Islander 3-Hispanic (can be any race) 4-Black (non-Hispanic) 5-White (non-Hispanic) *Enter a code for each teacher.* (c)	New *Enter an "N" if the teacher's total years in the teaching profession at all schools and school districts (not just their current school/district) is less than 3 years, not counting this school year.* (d)	Bilingual/ESL/ESOL *Mark (X) if applicable.* **Bilingual teachers** use native language to varying degrees to instruct students with limited English proficiency. **English as a Second Language (ESL) and English for Speakers of Other Languages (ESOL) teachers** provide intensive instruction in English to students who have limited English proficiency. **Note:** *Do not include regular foreign language teachers as Bilingual, ESL, or ESOL teachers.* (e)	*Mark (X) in ONLY ONE of columns (f) through (o)*									
					ELEMENTARY K-6			SECONDARY 7-12						
					General elementary (f)	Special education (g)	Other (h)	Math (i)	Science (j)	English (k)	Social studies (l)	Vocational education (m)	Special education (n)	Other (o)
11														
12														
13														
14														
15														
16														
17														
18														
19														
20	46													

Listing of NCES Working Papers to Date

Number	Title	Contact
94-01	Schools and Staffing Survey (SASS) Papers Presented at Meetings of the American Statistical Association	Dan Kasprzyk
94-02	Generalized Variance Estimate for Schools and Staffing Survey (SASS)	Dan Kasprzyk
94-03	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
94-04	The Accuracy of Teachers' Self-reports on their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey	Dan Kasprzyk
94-05	Cost-of-Education Differentials Across the States	William Fowler
94-06	Six Papers on Teachers from the 1990-91 SASS and Other Related Surveys	Dan Kasprzyk
94-07	Data Comparability and Public Policy: New Interest in Public Library Data Papers Presented at Meetings of the American Statistical Association	Carrol Kindel
95-01	Schools and Staffing Survey: 1994 papers presented at the 1994 Meeting of the American Statistical Association	Dan Kasprzyk
95-02	QED Estimates of the 1990-91 Schools and Staffing Survey: Deriving and Comparing QED School Estimates with CCD Estimates	Dan Kasprzyk
95-03	Schools and Staffing Survey: 1990-91 SASS Cross-Questionnaire Analysis	Dan Kasprzyk

Listing of NCES Working Papers to Date (Continued)

Number	Title	Contact
95-04	National Education Longitudinal Study of 1988: Second Follow-up Questionnaire Content Areas and Research Issues	Jeffrey Owings
95-05	National Education Longitudinal Study of 1988: Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors	Jeffrey Owings
95-06	National Education Longitudinal Study of 1988: Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data	Jeffrey Owings
95-07	National Education Longitudinal Study of 1988: Conducting Trend Analyses HS&B and NELS:88 Sophomore Cohort Dropouts	Jeffrey Owings
95-08	CCD Adjustments to the 1990-91 SASS: A Comparison of Estimates	Dan Kasprzyk
95-09	The Results of the 1993 Teacher List Validation Study (TLVS)	Dan Kasprzyk
95-10	The Results of the 1991-92 Teacher Follow-up Survey (TFS) Reinterview and Extensive Reconciliation	Dan Kasprzyk
95-11	Measuring Instruction, Curriculum Content, and Instructional Resources: The Status of Recent Work	Sharon Bobbitt & John Ralph
95-12	Rural Education Data User's Guide	Samuel Peng

Listing of NCES Working Papers to Date (Continued)

Number	Title	Contact
95-13	Assessing Students with Disabilities and Limited English Proficiency	James Houser
95-14	Empirical Evaluation of Social, Psychological, & Educational Construct Variables Used in NCES Surveys	Samuel Peng
95-15	Classroom Instructional Processes: A Review of Existing Measurement Approaches and Their Applicability for the Teacher Follow-up Survey	Sharon Bobbitt
95-16	Intersurvey Consistency in NCES Private School Surveys	Steven Kaufman
95-17	Estimates of Expenditures for Private K-12 Schools	Steve Broughman
95-18	An Agenda for Research on Teachers and Schools: Revisiting NCES' Schools and Staffing Survey	Dan Kasprzyk
96-01	Methodological Issues in the Study of Teachers' Careers: Critical Features of a Truly Longitudinal Study	Dan Kasprzyk
96-02	Schools and Staffing Survey (SASS): 1995 Selected papers presented at the 1995 Meeting of the American Statistical Association	Dan Kasprzyk
96-03	National Education Longitudinal Study of 1988 (NELS:88) Research Framework and Issues	Jeffrey Owings
96-04	Census Mapping Project/School District Data Book	Tai Phan

Listing of NCES Working Papers to Date (Continued)

Number	Title	Contact
96-05	Cognitive Research on the Teacher Listing Form for the Schools and Staffing Survey	Dan Kasprzyk

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